Date: Thu, 8 Sep 94 14:58:38 PDT

From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>

Errors-To: Info-Hams-Errors@UCSD.Edu

Reply-To: Info-Hams@UCSD.Edu

Precedence: Bulk

Subject: Info-Hams Digest V94 #1006

To: Info-Hams

Info-Hams Digest Thu, 8 Sep 94 Volume 94 : Issue 1006

Today's Topics:

> Are ordinary alkalines rechargeable?

AMSAT/NASA Keplerian File Format

A Repeater on 147.555?!? (2 msgs)

Daily Summary of Solar Geophysical Activity for 07 September

Info-Hams Digest V94 #960

IPS Daily Report - 07 September 94

PD/Shareware Morse Trainer

What is an ELMER?????

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu> Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu> Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available (by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text herein consists of personal comments and does not represent the official policies or positions of any party. Your mileage may vary. So there.

Date: Thu, 8 Sep 1994 03:28:21 GMT

From: netcomsv!netcom.com!russek@decwrl.dec.com
Subject: > Are ordinary alkalines rechargeable?

To: info-hams@ucsd.edu

I heard you guys argueing about alkaline rechargability and thought I'd help out. You mentioned:

- > I was in a Radio Shack the other day and I overheard a salesperson
- > selling someone a battery charger, and he was clearly claiming that
- > it could recharge alkaline batteries. He even sold them ordinary
- > RS alkalines, so we're not talking about the newfangled
- > "rechargeable alkalines" which can be recharged something like 25

> times.

Hehehe, I (unfortunatly) happen to be a Radio Shack "Sales Associate", and yes we do, or I should say did carry a "Buddy L" Alkaline recharger.

Believe it or not, it does work! Here's the catch, you get maybe 3 recharges out of the average alkaline, and it must be recharged when they are weak (1.2V I believe) or it won't work. The concept is simple:

All batteries can be charged, including lithium, carbon, alkaline, silver oxide, etc.

If you ever looked at a nicad closely you will ALLWAYS find vent holes (even if you don't know where to look, THEY ARE THERE)

These holes are to allow gases to escape durring charging.

Well, you guessed it, Alkalines have no vent holes, hense they will leak if charged with conventional chargers.

The way those "Alkaline chargers" work is they closely monitor the battery's drain(amperage) on the charger, as soon as it jumps up(to a point at which large voplumns of gas are emitted) it lowers the charge current. It goes up and down in a cycle bringing the battery right up to the bubble point and then drops it to allow the small amounts of gas to be released for the next cycle. Naturally, it is impossible to COMPLETELY seal a battery, so by slowing down the rate the gas escapes you can fit it through a smaller hole.

Quick note here, no other radio shack employee in the world probably knows that.I actually took one of these things home and monitored everything it did through a cool meter I picked up at work that logs values to a computer. Carefull what you believe from Radio Shack employees, we work commission and some of us(not me) will say anything for a sale(that Buddy L Charger was \$59) By the way, it was discontinued.

One last note, the mall stores are the worst, they don't even get feed back info from customers so thier knoledge base is small. Well, maybe it's not too bad, I know a few good salesman(knoledgable) (sp?)

Well, Gotta run, it's too late. Got to work tomorow hehehehe.

Date: 8 Sep 94 22:36:19 GMT From: news-mail-gateway@ucsd.edu

Subject: AMSAT/NASA Keplerian File Format

To: info-hams@ucsd.edu

Hi Ray. Thank you for the great service you provide! Just a word of caution: Although your mail host allows you longer files, please don't forget that the "fragile" hf AX.25 packet radio forwarding stations usually ask one to keep the file size to not much over 5 KB if possible. For more info you may wish to check with either John N4QQ or Tom W3IWI or others about this concern. 73, Pat WD8LAQ.

Date: 7 Sep 1994 17:55:40 -0700

From: ihnp4.ucsd.edu!swrinde!emory!metro.atlanta.com!mhv.net!news.sprintlink.net!

rain.org!coyote!leigh@network.ucsd.edu

Subject: A Repeater on 147.555?!?

To: info-hams@ucsd.edu

Thanks to all who replied to my original bulletin. I especially liked the comments of Jeff/NH6IL; low power FM simplex using high-gain antennas sharpens radio operating techniques.

I was surprised at the amount of responses to my rhetorical question as to "every ham having a right to own a repeater". While legally this is correct, the reality of Southern California with repeaters often wildly uncoordinated makes this a scary proposition.

Yes, I understand the ARRL OOs are not the FCC, but I still believe they should adhere to the Band Plan. When I posted the same message on Packet, I recieved a reply from an OO who sympathisized with the W6FP/147.555 repeater group. He informed me that they had applied for a conventional repeater pair from the local coordinating group, but were denied due to cronyism between the coordinating group and and a repeater owner on the pair they had applied for. The OO felt this justified the repeater group using two simplex freqs; I feel it does not. There are more than enough repeaters in Southern California, and some don't recieve all that much use.

Thanks again for the commentary and input; 'hope to catch all of you on 2 meter FM simplex or SSB someday. 73 from Santa Barbara DE KM6JE/Leigh.

Date: 8 Sep 1994 03:28:03 GMT

From: news2.near.net!news.delphi.com!davesparks@yale.arpa

Subject: A Repeater on 147.555?!?

To: info-hams@ucsd.edu

> This is going to start a flame war - I just know it, but I think it's a

> valid point, and one which needs making:

> If the "No CW test requirments for HF" crowd get their way, and all these

> people suddenly have access to the HF bands as well, how crowded will they > be?

My guess is, "not very". On 2m, you can buy a \$200-300 HT, hit a repeater, and talk to dozens of people as clearly as talking over the telephone within 10 minutes of getting it home and opening the box, or perhaps even ON THE WAY HOME. I'd like to see someone do that on HF.

HF and VHF attract different people for different reasons. I'm not knocking HF, merely observing that it's not everyone's "cup of tea".

Date: Wed, 7 Sep 1994 21:54:47 MDT

From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!europa.eng.gtefsd.com! newsxfer.itd.umich.edu!nntp.cs.ubc.ca!alberta!ve6mgs!usenet@network.ucsd.edu

Subject: Daily Summary of Solar Geophysical Activity for 07 September

To: info-hams@ucsd.edu

DAILY SUMMARY OF SOLAR GEOPHYSICAL ACTIVITY

07 SEPTEMBER, 1994

(Based In-Part On SESC Observational Data)

SOLAR AND GEOPHYSICAL ACTIVITY INDICES FOR 07 SEPTEMBER, 1994

!!BEGIN!! (1.0) S.T.D. Solar Geophysical Data Broadcast for DAY 250, 09/07/94
10.7 FLUX=092 90-AVG=080 SSN=089 BKI=1445 4333 BAI=022
BGND-XRAY=A8.1 FLU1=1.9E+06 FLU10=1.6E+04 PKI=3445 5344 PAI=028
BOU-DEV=009,050,057,115,058,025,027,035 DEV-AVG=047 NT SWF=00:000
XRAY-MAX= B8.4 @ 2058UT XRAY-MIN= A6.8 @ 2325UT XRAY-AVG= B1.2
NEUTN-MAX= +001% @ 1355UT NEUTN-MIN= -004% @ 1655UT NEUTN-AVG= -1.1%
PCA-MAX= +0.2DB @ 0920UT PCA-MIN= -0.3DB @ 1810UT PCA-AVG= -0.0DB
BOUTF-MAX=55218NT @ 2235UT BOUTF-MIN=55172NT @ 1748UT BOUTF-AVG=55203NT
GOES7-MAX=P:+000NT@ 0000UT GOES7-MIN=N:+000NT@ 0000UT G7-AVG=+062,+000,+000
GOES6-MAX=P:+133NT@ 1859UT GOES6-MIN=N:-065NT@ 1352UT G6-AVG=+084,+029,-008
FLUXFCST=STD:092,090,090;SESC:092,090,090 BAI/PAI-FCST=025,020,020/035,025,025
KFCST=3555 5443 2346 5432 27DAY-AP=000,016 27DAY-KP=3333 3333 3442 3333
WARNINGS=*SWF

ALERTS=**SWEEP:TYPEII@2052UTC

!!END-DATA!!

NOTE: The Effective Sunspot Number for 06 SEP 94 was 28.0.

The Full Kp Indices for 06 SEP 94 are: 1+ 3+ 3- 50 3+ 3- 20 2
The 3-Hr Ap Indices for 06 SEP 94 are: 5 18 11 46 18 12 9 7

Greater than 2 MeV Electron Fluence for 07 SEP is: 5.4E+07

SYNOPSIS OF ACTIVITY

Solar activity was very low. Only minor B-class activity was noted this period. The largest region visible on the disk, Region 7773 (S08W31), continues its slow decay while Region 7776 (S08E16) continues to slowly grow. Also indicating slow growth is Region 7774 (N11W22).

Solar activity forecast: solar activity is expected to be low with Regions 7773 and 7776 showing the best chance of C-class and possible M-class activity.

STD: Overall electron fluence at greater than 2 MeV was near-normal to moderate levels. Another full-disk Yohkoh x-ray image has been appended to this report.

The geomagnetic field has been at quiet to active levels for the past 24 hours. A period of minor to severe storm conditions was reached from 07/09-18Z. The GT 2 MeV electron flux reached high levels.

Geophysical activity forecast: the geomagnetic field is expected to be mostly unsettled to active for the next three days. Periods of storm conditions should be expected. Activity is in response to a favorably positioned coronal hole.

Event probabilities 08 sep-10 sep

Class M 15/15/15 Class X 01/01/01 Proton 01/01/01 PCAF Green

Geomagnetic activity probabilities 08 sep-10 sep

A. Middle Latitudes

Active 30/25/25
Minor Storm 20/15/15
Major-Severe Storm 10/10/10

B. High Latitudes

Active 30/25/25
Minor Storm 25/20/20
Major-Severe Storm 15/15/10

HF propagation conditions were degraded today in response to increased levels of geomagnetic and auroral activity. Equatorward expansion of the auroral ovals resulted in greater signal degradation than normal for many middle-latitude night crossing circuits. Increased fading, absorption, and multipathing were observed. Similar degraded conditions are expected throughout the next 24 to 48 hours before signals should begin improving.

COPIES OF JOINT USAF/NOAA SESC SOLAR GEOPHYSICAL REPORTS

REGIONS WITH SUNSPOTS. LOCATIONS VALID AT 07/2400Z SEPTEMBER

NMBR LOCATION LO AREA Z LL NN MAG TYPE

7771 N06W57 123 0070 HSX 01 001 ALPHA

7773 S08W31 097 0290 EK0 13 015 BETA

7774 N11W22 088 0080 CSO 09 013 BETA

7776 S08E16 050 0270 CHO 08 009 BETA

7777 S12W50 116 0000 AXX 00 001 ALPHA

7775 N16E09 057 PLAGE

REGIONS DUE TO RETURN 08 SEPTEMBER TO 10 SEPTEMBER

NMBR LAT LO

7769 N10 311

LISTING OF SOLAR ENERGETIC EVENTS FOR 07 SEPTEMBER, 1994

BEGIN MAX END RGN LOC XRAY OP 245MHZ 10CM SWEEP 1435 1435 1436 140

POSSIBLE CORONAL MASS EJECTION EVENTS FOR 07 SEPTEMBER, 1994

BEGIN MAX END LOCATION TYPE SIZE DUR II IV
NO EVENTS OBSERVED

INFERRED CORONAL HOLES. LOCATIONS VALID AT 07/2400Z

ISOLATED HOLES AND POLAR EXTENSIONS
EAST SOUTH WEST NORTH CAR TYPE POL AREA OBSN

02 N55W00 N13W54 N33W60 N61W03 096 ISO POS 036 10830A 03 S03E49 S06E44 S03E40 N04E46 023 ISO NEG 001 10830A

SUMMARY OF FLARE EVENTS FOR THE PREVIOUS UTC DAY

Date	Begin	Max	End	Xray	0р	Region	Locn	2695	MHz	8800	MHz	15.4	GHz
06 Sep:	0022	0059	0109	C7.8	1F	7773	S08W08						
	0337	0341	0343	B2.9	SF	7773	S08W08						
	0418	0432	0441	B6.7	SF	7773	S08W18						
	0628	0633	0637	C1.5	SF	7776	S07E41						
	0921	0925	0929	B2.1									
	1154	1159	1202	B3.3	SF	7773	S09W18						
	1216	1221	1227	B7.2	SF	7776	S07E43						
	1229	1229	1231		SF	7776	S08E42						
	1436	1441	1446	B3.9									
	1620	1624	1633	B2.2									
	2123	2128	2131	B1.6									

REGION FLARE STATISTICS FOR THE PREVIOUS UTC DAY

	С	М	Χ	S	1	2	3	4	Total	(%)
Region 7773:	1	0	0	3	1	0	0	0	004	(36.4)
Region 7776:	1	0	0	3	0	0	0	0	003	(27.3)
Uncorrellated:	0	0	0	0	0	0	0	0	004	(36.4)

Total Events: 011 optical and x-ray.

EVENTS WITH SWEEPS AND/OR OPTICAL PHENOMENA FOR THE LAST UTC DAY

Date	Begin	Max	End	Xray	0р	Region	Locn	Sweeps/Optical Observations
06 Sep:	0022	0059	0109	C7.8	1F	7773	S08W08	III,Continuum
	0337	0341	0343	B2.9	SF	7773	S08W08	III
	0418	0432	0441	B6.7	SF	7773	S08W18	III
	0628	0633	0637	C1.5	SF	7776	S07E41	III
	1620	1624	1633	B2.2				III

NOTES:

All times are in Universal Time (UT). Characters preceding begin, \max , and end times are defined as: B = Before, U = Uncertain, A = After.

All times associated with x-ray flares (ex. flares which produce associated x-ray bursts) refer to the begin, max, and end times of the x-rays. Flares which are not associated with x-ray signatures use the optical observations to determine the begin, max, and end times.

Acronyms used to identify sweeps and optical phenomena include:

II = Type II Sweep Frequency Event

III = Type III Sweep IV = Type IV Sweep V = Type V Sweep

Continuum = Continuum Radio Event = Loop Prominence System, Loop

Spray = Limb Spray,
Surge = Bright Limb Surge,
EPI = Fruntivo Prominens

EPL = Eruptive Prominence on the Limb.

SPECIAL INSERT: YOHKOH FULL-DISK X-RAY IMAGE

07 September 1994, 03:00 UTC

North

	.,:;;;;;:::,,,,
,,,::::,,,,,,	
,;:::;::,,	,,:;;;;::::,,,
,,:::;:,,	,,,,
,,::;:,,,	,,::;;;:::,,,,
,,,:::,,,	,:::;;:::,,
,,,;;	, , : : ; ; ; : : , , ,
,::;-:	
.,,::;;:,	
,:::;;.,.,,,,:,,:,	
.,,::;;:,,,,,-! -:,,,,,	
,:;;;::,,,,,;:,;;+1!;:,,,,,;:::	
··,·,·,·,·,·,·,·,·,·,·,·,·,·,·,·,·,·,·	
.,,:;++;::::,,,,:::;;,:::,,,,;	
.,:;-!2-::::;-+ !!!!+-::;,,,,;	
.,:;- 1 ;::::;;+ 24*42 ;:::,,,,,:;	
.,:;-+ ;::;:;;-+++!*#@*11 :::,,,:;	
,:;;-:;;;;-+ 1*@*2!122!-:,,,;;	
,,::,,,;;+!121! ++1! -::,,;;;	
:,,:;;;- ++;;-;;::::,,,,,;	:;-+ +-;;;;:,,:;+!! +-;::,,
::::::;;;;::::::,,,,,,	, , , : : : : : ; ; - ; ; ; : : ; ; ; ; ; - + + ; : : , , ,
,:::,,::,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, , , , : : : : : : ; ; ; : : : , : : ; ; ; ; ; ; : : , ,

,::::,,,,,,,,,,,,,,,,,,,,,,,,,,,,,;::::::
South
KEY: East and west limbs are to the left and right respectively. Emission strength, from minimum to maximum are coded in the following way:
[space] . , : ; - + ! 1 2 3 4 * # @
Units used are arbitrary, for illustrative purposes. Get "showasc.zip" from "pub/solar/Software" at the anonymous FTP site: ftp.uleth.ca (IP # 142.66.3.29) to view these images on VGA screens. Remove all but the image data before typing "showasc filename".
** End of Daily Report **
Date: 8 Sep 94 19:53:18 GMT From: news-mail-gateway@ucsd.edu Subject: Info-Hams Digest V94 #960 To: info-hams@ucsd.edu
Unsubscribe.
Date: Wed, 7 Sep 1994 23:44:58 GMT From: library.ucla.edu!europa.eng.gtefsd.com!howland.reston.ans.net!spool.mu.edu! munnari.oz.au!yarrina.connect.com.au!harbinger.cc.monash.edu.au!news.cs.su.oz.au! metro!ipso!@ihnp4.ucsd.edu Subject: IPS Daily Report - 07 September 94 To: info-hams@ucsd.edu
SUBJ: IPS DAILY SOLAR AND GEOPHYSICAL REPORT ISSUED AT 07/2330Z SEPTEMBER 1994 BY IPS RADIO AND SPACE SERVICES FROM THE REGIONAL WARNING CENTRE (RWC), SYDNEY. SUMMARY FOR 07 SEPTEMBER AND FORECAST FOR 08 SEPTEMBER - 10 SEPTEMBER

1A. SOLAR SUMMARY Activity: low

Flares: none

Observed 10.7 cm flux/Equivalent Sunspot Number : 92/37

GOES satellite data for 06 Sep

Daily Proton Fluence >1 MeV: 8.7E+05 Daily Proton Fluence >10 MeV: 1.5E+04 Daily Electron Fluence >2 MeV: 2.2E+06

X-ray background: B1.1

Fluence (flux accumulation over 24hrs)/ cm2-ster-day.

1B. SOLAR FORECAST

08 Sep 09 Sep 10 Sep Activity Low Low Low

Fadeouts None expected None expected None expected

Forecast 10.7 cm flux/Equivalent Sunspot Number for 08 Sep: 92/37

2A. MAGNETIC SUMMARY

Geomagnetic field at Learmonth: unsettled to active

Estimated Indices : A K Observed A Index 06 Sep

Learmonth 24 3344 4444

Fredericksburg 20 14 Planetary 27 15

Observed Kp for 06 Sep: 1335 3322

2B. MAGNETIC FORECAST

DATE Ap CONDITIONS

08 Sep 30 Mostly active, with brief minor storm periods

possible.

Mostly active, with brief minor storm periods 09 Sep 25

possible.

10 Sep 20 Active

COMMENT: IPS Geomagnetic Warning 3 was issued on 4 September and is

current for interval 7-10 September.

3A. GLOBAL HF PROPAGATION SUMMARY

LATITUDE BAND

LOW DATE MIDDLE HIGH fair-normal 07 Sep normal poor-fair

PCA Event : None.

3B. GLOBAL HF PROPAGATION FORECAST

LATITUDE BAND

DATE	LOW	MIDDLE	HIGH
08 Sep	normal	fair-normal	poor-fair
09 Sep	normal	fair-normal	poor-fair
10 Sep	normal	normal	fair

4A. AUSTRALIAN REGION IONOSPHERIC SUMMARY

Observed

DATE T-index MUFs at Sydney

07 Sep 28 near predicted monthly values

Predicted Monthly T-index for September: 20

4B. AUSTRALIAN REGION IONOSPHERIC FORECAST

DATE T-index MUFs

08 Sep 25 Near predicted monthly values

09 Sep 15 10 to 20% below predicted monthly values

10 Sep 25 Near predicted monthly values

COMMENT: IPS HF Communications Warning 2 was issued on 4 September and is current for interval 7-10 September. The mid latitude ionospheric response to current geomagnetic activity has not been as severe as originally forecast. Depressed MUFs are now forecast for tomorrow (9 Sep) only.

- -

IPS Regional Warning Centre, Sydney | IPS Radio and Space Services

RWC Duty Forecaster tel: +61 2 4148329 | PO Box 5606

Recorded Message tel: +61 2 4148330 | West Chatswood NSW 2057

email: rwc@ips.oz.au fax: +61 2 4148331 |AUSTRALIA

Date: Thu, 8 Sep 1994 10:57:15 GMT

From: zib-berlin.de!math.fu-berlin.de!news@uunet.uu.net

Subject: PD/Shareware Morse Trainer

To: info-hams@ucsd.edu

Hi:

I've got a friend interested in learning the code and would like to know a good morse

trainer that he may be able to get off the Internet. If you have successfully used any of

these programs to both "learn" the code and get your speed up please let me know. The program can be for a PC or a MAC.

Thanks and 73, Kevin, kj4qf -----

Date: 8 Sep 1994 13:19:56 +1000

From: usc!howland.reston.ans.net!europa.eng.gtefsd.com!newsxfer.itd.umich.edu!isclient.merit.edu!msuinfo!harbinger.cc.monash.edu.au!news.cs.su.oz.au!metro!

news.ci.com.au!eram@ihnp4.ucsd.edu
Subject: What is an ELMER?????

To: info-hams@ucsd.edu

In article <34ioii\$23h\$1@mhadf.inhouse.compuserve.com>,
 Hans Brakob <71111.260@CompuServe.COM> writes:

| The term Elmer is not very old, perhaps 10-15 years?

Come off it - I remember seeing the term 20+ years ago, in articles that were 10+ years old at the time.

- -

Dave Horsfall (VK2KFU) | dave@esi.com.au | VK2KFU @ VK2AAB.NSW.AUS.OC | PGP 2.6 Opinions expressed are mine. | E7 FE 97 88 E5 02 3C AE 9C 8C 54 5B 9A D4 A0 CD

Date: 8 Sep 1994 12:27:53 +1000

From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!europa.eng.gtefsd.com! aggedor.rmit.EDU.AU!harbinger.cc.monash.edu.au!news.cs.su.oz.au!metro! news.ci.com.au!eram.esi.com.au!not-for-mail@@.

To: info-hams@ucsd.edu

References <1994Sep7.101330.1@dstos3.dsto.gov.au>, <34jgf7\$jtu@eram.esi.com.au>, <1994Sep8.095715.1@dstos3.dsto.gov.au>.su.oz.
Subject : Re: VK2WI Weekly News, 4th September, 1994

In article <1994Sep8.095715.1@dstos3.dsto.gov.au>,
 peake@dstos3.dsto.gov.au (Alan Peake) writes:

- I did tune around on 40 after the broadcast and heard the VK3 callback ok.
- | I assume that the VK2 callback is on the same freq (7146) as the broadcast.
- | I listened for a while on that (LSB) but heard nothing. Perhaps I should

| rearrange my piece of wet string!

Yes - the callbacks are on 7146, same as the broadcast. Be aware though that the HF callbacks are done by one person (the other one does the VHF callbacks) so you may have to wait a bit. I think it's 160m, 80m, 40m and 30m in that order (but I may be wrong - it seems to depend upon

the whim of the announcer).
Dave Horsfall (VK2KFU) dave@esi.com.au VK2KFU @ VK2AAB.NSW.AUS.OC PGP 2.6 Opinions expressed are mine. E7 FE 97 88 E5 02 3C AE 9C 8C 54 5B 9A D4 A0 CD
Date: 8 Sep 94 09:57:15 +0930 From: ihnp4.ucsd.edu!library.ucla.edu!europa.eng.gtefsd.com! howland.reston.ans.net!spool.mu.edu!munnari.oz.au!foxhound.dsto.gov.au! fang.dsto.gov.au!dstos3.dsto.gov.au!peake@network.ucsd.edu To: info-hams@ucsd.edu
References <34hrdd\$e3g@eram.esi.com.au>, <1994Sep7.101330.1@dstos3.dsto.gov.au>, <34jgf7\$jtu@eram.esi.com.au>ool.mu Subject : Re: VK2WI Weekly News, 4th September, 1994
> There are call-backs on all bands. However, what you hear in the morning > on 160, 80 and 40 is AM, whereas callbacks (on 80 and 40) are taken on > an SSB transceiver.
I did tune around on 40 after the broadcast and heard the VK3 callback ok. I assume that the VK2 callback is on the same freq (7146) as the broadcast. I listened for a while on that (LSB) but heard nothing. Perhaps I should rearrange my piece of wet string!
Alan
End of Info-Hams Digest V94 #1006
